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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,938	12/08/2003	Sachiko Nemoto	5243-002-US01	8989

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EXAMINER
RIVAS, SALVADOR E

ART UNIT	PAPER NUMBER
2477	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/728,938	NEMOTO ET AL.
	Examiner	**Art Unit**	
	SALVADOR E. RIVAS	2477	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _06 November 2009_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-5_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) _1,2 and 4_ is/are allowed.
6)☒ Claim(s) _3 and 5_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   This Action is in response to Applicant's amendments filed on November 06,

2009. **Claims 1-5** are now pending in the present application. **This Action is made**

Non-Final.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current

U.S. practice. They appear to be a literal translation into English from a foreign

document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
      obviousness or nonobviousness.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tomar et**

al. (U.S. Patent # 6,804,248 B1) in view of **Yu (U.S. Patent Application Publication #**

2001/0043603 A1), and further in view of **Patenaude (U.S. Patent Application**

Publication # 2004/0076168 A1).

Regarding **claim 3**, Tomar et al. teach a SONET multiplex isolation device (Fig.1

@ 140; Fig.2 @ 210, 220, 230, 240, 250, 260; Fig.9b @ 900; read as "methods and

apparatuses for conversion of digital data between a parallel data signal and one or

more serial data signals." (Column 1 Lines 8-10)), wherein a plurality of the multiplexing

parts (read as interface cards), each of which is established corresponding to a STS

path identifier respectively and each of which is operable to multiplex an Ethernet frame

("the switching system can include various interface cards that support transmission of

DS-N, Ethernet, and OC-N signals, where N is any SONET supported (e.g., 1, 3, 12,

48, 192, 768) data rate. Further, the DS-N cards can be configured to receive/transmit

signals in a frame relay (FR) or asynchronous transfer mode (ATM) format." (Column 5

Lines 66-67 and Column 6 Lines 1-5)),

However, fail to explicitly teach establishes a flag inserting part that inserts a flag

that indicates an input side Ethernet frame transmission fault in an Ethernet frame that

is encapsulated by a 1st encapsulating part and

wherein a filtering part breaks down the frame when a VLAN identifier of the

frame is different from any one of the VLAN identifiers that is held by a holding part.

Yu teaches a transmission method and apparatus (Fig.9) for "... transmitting data

packets from an upper layer side device to a lower layer side device." (Paragraph [0022]

Lines 1-3) Furthermore, Yu teaches a SONET multiplex isolation device (read as ADM

(Fig.9, Fig.15)) wherein the multiplexing part establishes a flag inserting part that inserts

a flag that indicates an input side Ethernet frame transmission fault in an Ethernet frame

that is encapsulated by a 1st encapsulating part (Paragraph [0020] Lines 16-20,

Paragraph [0119]).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to employ the functions for adapting and encapsulating

a data packet as taught by Yu to modify the interface system with Ethernet/SONET

conversion capabilities taught by Tomar et al. for the purpose of identifying a plurality of

Ethernet frames to be converted to one STS signal and vice versa.

However, Tomar et al. and Yu fail to explicitly teach wherein a filtering part breaks down the frame when a VLAN identifier of the frame is different from any one of the VLAN identifiers that is held by a holding part.

Patenaude teaches a device that "permits exchange of information between optical carrier systems and packet networks." (Paragraph [0017] Lines 1-3) Furthermore, Patenaude teaches a SONET multiplex isolation device (Fig.3 @ ADM) wherein a filtering part (read as a policing, shaping, flow control and subscriber management functionality (Fig.8 @ 806 , Paragraph [0045], Paragraph [0046] 1-5)) breaks down (read as intelligent traffic shaping) the frame when a VLAN identifier (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) of the frame is different from any one of the VLAN identifiers (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) that is held by said holding part (Fig.8 @ 806).("The present invention may provide subscriber port shaping/policing capabilities configurable to support IP Differentiated Services Code Point (DSCP) prioritized and/or weighted queuing enabling, ..."(Paragraph [0046] Lines 5-8) Furthermore, the policing, shaping, flow control and subscriber management functionality module may execute "Discretionary traffic shaping may be based on flow/priority type, and may permit traffic shaping at a physical port to be honored as may be required by a service level agreement (SLA)." (Paragraph [0046] Lines 27-30) Also, the policing, shaping, flow control and subscriber management functionality module may "permit the collection of usage statistics based on class-of-service (CoS)/quality of service (QoS) for network

management and SLA conformance purposes. Key benchmarks in such agreements

may be latency, latency variation and data loss, and such parameters may be measured

by an embodiment of the present invention. Other statistics that may be collected

include port, VLAN, and 802.1D(p) traffic statistics, and available resources (bandwidth,

buffer space, protection bandwidth, etc)." (Paragraph [0047] Lines 2-10))

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to employ the policing, shaping, flow control and

subscriber management functionalities as taught by Patenaude and the functions for

adapting and encapsulating a data packet as taught by Yu to modify the interface

system with Ethernet/SONET conversion capabilities taught by Tomar et al. for the

purpose of processing a plurality of Ethernet frames to be converted to one STS signal

and vice versa.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tomar et

al. (U.S. Patent # 6,804,248 B1)**, in view of **Zelig et al. (U.S. Patent Application

Publication # 2002/0110087 A1)**, and further in view of **Patenaude (U.S. Patent

Application Publication # 2004/0076168 A1)**.

Regarding **claim 5**, Tomar et al. teach a frame transmission method for frame

transmission for an Ethemet frame and SONET frame (Fig.1 @ 140; Fig.2 @ 210, 220,

230, 240, 250, 260; Fig.9b @ 900; read as "methods and apparatuses for conversion of

digital data between a parallel data signal and one or more serial data signals." (Column

1 Lines 8-10)), comprising:

establishing a plurality of multiplexing parts (read as interface cards) corresponding to a STS path identifier, each of which is operable to multiplex an Ethernet frame. ("the switching system can include various interface cards that support transmission of DS-N, Ethernet, and OC-N signals, where N is any SONET supported (e.g., 1, 3, 12, 48, 192, 768) data rate. Further, the DS-N cards can be configured to receive/transmit signals in a frame relay (FR) or asynchronous transfer mode (ATM) format." (Column 5 Lines 66-67 and Column 6 Lines 1-5))

However, Tomar et al fail to explicitly teach inputting a plurality of Ethemet frames having a specific VLAN identifier among the plurality of Ethernet frames passes through to be multiplexed; and

breaking down a frame using a filtering part when a VLAN identifier of the frame is different from any one of the VLAN identifiers that is held by the holding part; and

Zelig et al. teaches a multiplexing part (read as switch labeled "MUX A" (Fig.1 @ 26)) capable of multiplexing an Ethernet frame having said specific VLAN identifier (MUX A "multiplexes ... different Ethernet ports 28 of the switch and having different VLAN addresses 30", paragraph [0052], Line 10-12) corresponding to said specific STS path identifier that is held by said 1st holding part among a plurality of input Ethernet frame VLAN identifiers ("Switch 26 now registers the requested service in a service table it maintains and sends a signaling message regarding the service ..." (paragraph [0055], Line 1-3) which may contain the type of service (e.g. SONET over MPLS) and/or may contain an "additional index ... to the signaling message to specify the

range of VLANs for Ethernet services, or the number of the SONET path for SONET signals at both ends of the connection" (paragraph [0055], Line 16-20)).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the VLAN ID session map as taught by Zelig et al. within the interface system with Ethernet/SONET conversion capabilities taught by Tomar et al. for the purpose of transmitting data packets from an upper layer side device to a lower layer side device.

However, Yu and Zelig et al. fail to explicitly teach breaking down a frame using a filtering part when a VLAN identifier of the frame is different from any one of the VLAN identifiers that is held by the holding part.

Patenaude teaches a device that "permits exchange of information between optical carrier systems and packet networks." (Paragraph [0017] Lines 1-3) Furthermore, Patenaude teaches a SONET multiplex isolation device (Fig.3 @ ADM) breaking down (read as intelligent traffic shaping) a frame using a filtering part (read as a policing, shaping, flow control and subscriber management functionality (Fig.8 @ 806 , Paragraph [0045], Paragraph [0046] 1-5)) when a VLAN identifier (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) of the frame is different from any one of the VLAN identifiers (read as a usage statistic based on class-of-service (CoS)/quality of service (QoS) for network management and SLA) that is held by said holding part (Fig.8 @ 806).("The present invention may provide subscriber port shaping/policing capabilities configurable to support IP Differentiated Services Code Point (DSCP) prioritized and/or weighted

queuing enabling, ..."(Paragraph [0046] Lines 5-8) Furthermore, the policing, shaping, flow control and subscriber management functionality module may execute "Discretionary traffic shaping may be based on flow/priority type, and may permit traffic shaping at a physical port to be honored as may be required by a service level agreement (SLA)." (Paragraph [0046] Lines 27-30) Also, the policing, shaping, flow control and subscriber management functionality module may "permit the collection of usage statistics based on class-of-service (CoS)/quality of service (QoS) for network management and SLA conformance purposes. Key benchmarks in such agreements may be latency, latency variation and data loss, and such parameters may be measured by an embodiment of the present invention. Other statistics that may be collected include port, VLAN, and 802.1D(p) traffic statistics, and available resources (bandwidth, buffer space, protection bandwidth, etc)." (Paragraph [0047] Lines 2-10))

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ Ethernet/SONET conversion capabilities and policing, shaping, flow control and subscriber management functionalities as taught by Patenaude and the VLAN ID mapping table as taught by Zelig et al. within the interface system with Ethernet/SONET conversion capabilities taught by Tomar et al. for the purpose of efficiently establishing communication between a telecom SDH/SONET transmission device and a remote access datacom device by adapting MAC frame directly to SDH/SONET and vice versa.

Allowable Subject Matter

4.   **Claims 1, 2, and 4** are allowed.

Regarding **claim 1**, the best prior art found during the examination of the present,

Patenaude (U.S. Patent Application Publication # 2004/0076168 A1) in view of **Zelig**

et al. (U.S. Patent Application Publication # 2002/0110087 A1), and further in view of

Yu (U.S. Patent Application Publication # 2001/0043603 A1), fail to disclose *"... a*

plurality of multiplexing parts, each of which is established corresponding to STS path

identifier respectively and each of which is operable to multiplex an Ethernet frame

having said specific VLAN identifier corresponding to said specific STS path identifier

that is held by said 1st holding part among a plurality of input Ethernet frame VLAN

identifiers;"

Claim 2 is also allowed by virtue of their dependency on claim 1.

Regarding **claim 4**, the best prior art found during the examination of the present,

Yu (U.S. Patent Application Publication # 2001/0043603 A1), in view of **Kong et al.**

(US Patent # 2002/0176450 A1), and further in view of **Patenaude (U.S. Patent**

Application Publication # 2004/0076168 A1), fail to disclose *"... a plurality of*

multiplexing parts, each of which is established corresponding to STS path identifier

respectively and each of which is operable to multiplex a plurality of Ethernet frames

having a specific VLAN identifier corresponding to the specific STS path identifier that is

held in the 1st holding part among an input plurality of Ethernet frame VLAN identifiers,

along with a 2^{na} SONET multiplex isolation device among the plurality of SONET

multiplex isolation devices with a 2^{na} holding part with the SONET frame specific STS

path identifier and Ethernet frame specific VLAN identifier placed opposite each other;"

Response to Arguments

5.   Applicant's arguments with respect to claims 3 and 5 have been considered but
are moot in view of the new ground(s) of rejection.

Conclusion

6.   **THIS ACTION IS MADE NON-FINAL.** Applicant is reminded of the extension of
time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed**

to:

> Commissioner for Patents
> P.O. Box 1450
> Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

> Customer Service Window
> Randolph Building
> 401 Dulany Street
> Alexandria, VA 22314

Any inquiry concerning this communication or early communications from the Examiner should be directed to Salvador E. Rivas whose telephone number is (571) 270-1784. The examiner can normally be reached on Monday-Friday from 7:30AM to 5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Chirag G. Shah can be reached on (571) 272- 3144. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Salvador E. Rivas
S.E.R./ser

February 5, 2010

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2477